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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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EXAMINER

QM01/0427

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SOLAK, T
ART UNIT PAPER NUMBER

3746
DATE MAILED:

04/27/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/334,208

Applicant(s)

DAVIS, JEFFREY

Examiner

Timothy P. Solak

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

- 15) ☐ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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FINAL ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills (3,851,995), in view of Long, Jr. (4,450,943). Mills, teaches a method of pumping an oil well, comprising the steps of: connecting a continuously running engine 16 (column 3, line 29-31) to a pump assembly 14 through a clutch (column 7, lines 6-8) and determining a selected event to actuate the clutch (column 2, lines 53-60). Although, Mills teaches most of the limitations of the claim, he does not disclose a pneumatic clutch or a supply of gas. Long, Jr., teaches an air clutch 10 equipped with inflatable air bladders 64 for connecting hub 70 to clutch plate 106 in order to transmit rotary motion. Long, Jr. further teaches a method of supplying gas to inflate the bladders (column 2, lines 3-9) in order to engage the clutch. Long, Jr. teaches the air bladders advantageously increased the life of the clutch (column 1, lines 40-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the air clutch taught by Long, Jr., in the method disclosed by Mills, to have advantageously increased the life of the clutch.

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3. Claims 2 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr. (both previously mentioned), in further view of Turner et al. (3,247,798). Mills, teaches most of the limitations of the claims, including a method for pumping an oil well depending on a selected event. Mills, however, does not teach the selected event to include a time interval or liquid level. Turner et al., disclosing a method of pumping an oil well, specifically teach a method to control the pumping cycle, based on periodic time intervals and the level within the well (column 6, line 19-23), in order to maintain an inflow of hydrocarbons from a producing formation (column 1, line 31). Turner et al., teach this method advantageously achieved maximum fluid production (column 6, lines 10-13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the time/level method taught by Turner et al., in the method disclosed by Mills, to have advantageously achieved maximum fluid production.

4. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr. (both previously mentioned), in further view of Gallaway (3,075,467). Although, Long, Jr. and Mills teach most of the limitations of the claim, including a method of pumping an oil well using a continuously running motor connected via a clutch equipped with pneumatically inflated bladders to a pumping assembly, they do not disclose using a supply of gas from the well to activate the clutch. Gallaway, disclosing a means of pumping liquids from a gas well, specifically teaches a method of using pressurized gas from the well to activate the pump (column 3, line 20). Gallaway, teaches this method was advantageously cost effective (column 1, line 25). Therefore,

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it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method taught by Gallaway, in the method disclosed by Mills, to have advantageously lowered the cost incurred by the method.

5. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr. and Gallaway, in further view of Turner et al. (all previously mentioned). Although, Boone, Long, Jr. and Gallaway, teach most of the limitations of the claim, including a method of pumping an oil well using a pneumatic clutch activated by a selected event, they do not disclose the event to include a time interval or a liquid level. Turner et al., disclosing a method of pumping an oil well, specifically teach a method to control the pumping cycle based on periodic time intervals and the level within the well (column 6, line 19-23). Turner et al., teach this method advantageously achieved maximum fluid production (column 6, lines 10-13). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the time/level method taught by Turner et al., in the method disclosed by Mills, to have advantageously achieved maximum fluid production.

6. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr. and Turner et al., in further view of Gallaway (all previously mentioned). Although Mills, Long, Jr. and Turner et al., teach most of the limitations of the claim, including a method of pumping an oil well including: a continuously running motor connected to a pumping assembly via a clutch equipped with pneumatically inflated bladders, they do not disclose using a supply of gas from the well to activate the clutch. Gallaway, disclosing a means of pumping liquids from a gas

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well, specifically teaches a method of using pressurized gas from the well to activate the pump (column 3, line 20). Gallaway, teaches this method was advantageously cost effective (column 1, line 25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method taught by Gallaway, in the method disclosed by Mills, to have advantageously lowered the cost incurred by the method.

7. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr. (both previously mentioned), in further view of Kuehn, III et al. (4,392,782). Mills, teaches most of the limitations of the claim, including a method of pumping an oil well by using a selected event to activate a pump in order to maintain an inflow of hydrocarbons from a producing formation while reducing the pump assembly's duty cycle (column 2, lines 36-39). Mills, however, does not disclose the selected event to be determined from directly monitoring the liquid level. Kuehn, III et al., disclosing a liquid level controller for oil wells, specifically teach a method consisting of: directly monitoring the liquid level inside a well (column 2, line 66) and actuating a pump to maintain the level between selected elevations (column 9, line 16). Kuehn, III et al., teach this method advantageously increased the efficiency and convenience of maintaining a liquid level in the well (column 9, line 16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method taught by Kuehn, III et al., in the method disclosed by Mills, to have advantageously increased the method's efficiency.

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8. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr. and Kuehn, III et al., in further view of Gallaway (all previously mentioned). Mills and Long, Jr. teach most of the limitations of the claim, including a method of pumping an oil well including: a continuously running motor connected to a pumping assembly via a clutch equipped with pneumatically inflated bladders. Mills and Long, Jr., however, do not disclose using a supply of gas from the well. Gallaway, disclosing a means of pumping liquids from a gas well, specifically teaches a method of using pressurized gas from the well to activate the pump (column 3, line 20). Gallaway, teaches this method was advantageously cost effective (column 1, line 25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the method taught by Gallaway, in the method disclosed by Mills, to have advantageously lowered the cost incurred by the method.

9. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr. (both previously mentioned). Mills, teaches a pumping assembly for maintaining hydrocarbon production from a well, comprising: an engine 16, a pump assembly 14, a clutch (column 7, lines 6-8), and a control unit 34 for actuating the clutch. Although, Mills teaches most of the limitations of the claim, he does not disclose a pneumatic clutch. Long, Jr., teaches an air clutch 10, equipped with inflatable air bladders 64 connecting hub 70 to clutch plate 106 for transmitting rotary motion. Long, Jr. teaches the air bladders advantageously increased the life of the clutch (column 1, lines 40-45). Therefore, it would have been obvious to one of ordinary skill

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in the art at the time the invention was made to have used the air clutch taught by Long, Jr., in the pumping assembly disclosed by Mills, to have advantageously increased the life of the clutch.

10. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr., in further view of Gallaway (all previously mentioned). Although, Mills and Long, Jr., teach most of the limitations of the claim, including a control unit to activate a pneumatic clutch with air bladders, they do not disclose using gas from the well to fill the air bladders. Gallaway, disclosing a means of pumping liquids from a gas well, specifically teaches using pressurized gas from the well to activate the pump (column 3, line 20). Gallaway, teaches using gas from the well was advantageously cost effective (column 1, line 25). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used gas from the well as taught by Gallaway, in the pumping assembly disclosed by Mills, to have advantageously lowered the cost of operation.

11. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr. and Gallaway (all previously mentioned), in further view of Dye (2,634,682). Although, Mills, teaches the activation of the pumping cycle depended on a selected event, he does not disclose the use of a timer. Dye, disclosing an oil well pumping assembly, specifically teaches a control unit comprised of a timer 4 for activating the pumping cycle. Dye, teaches that the timer advantageously allowed unattended operation of the pump (column 1, lines 23-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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have used the timer taught by Dye, in the pump assembly disclosed by Mills, to have advantageously allowed unattended operation of the pump.

12. Claim 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mills, in view of Long, Jr., in further view of Kuehn (all previously mentioned). Although, Mills teaches most of the limitations of the claims, including intermittent operation of a pump assembly dependent on well conditions, he does not disclose directly monitoring the liquid level. Kuehn, III et al., disclosing a liquid level controller for oil wells, specifically teach the use of thermistors 68 and 70 to monitor the level of liquid inside the well (column 2, line 66). Kuehn III, et al., further teach, the liquid level controller 10 receives signals from the sensors 68 and 70 and cycles the pump on and off to maintain the level below a maximum height. Kuehn, III et al., teach the thermistors advantageously increased the efficiency and convenience of maintaining a liquid level (column 9, line 16). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the thermistors taught by Kuehn, III et al., in the pump assembly disclosed by Mills, to have advantageously increased the units efficiency.

Response to Arguments

13. Applicant's arguments filed 04/10/2001 have been fully considered but they are not persuasive.

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In response to applicant's argument, that the use of an air bladder does not extend the life of the clutch, the Examiner agrees, however, the air bladder alone does not function as a clutch.

Long, Jr. states:

a "positive disconnection will typically improve the life of *the clutch*" (column 1, lines 40-41).

Long, Jr. further states:

"it is an object of the instant invention to provide a *selective power transmission device* which exhibits negligible input to output coupling when in a deactivated state." (Column 2, lines 37-40).

The combination of prior art used in the rejection, simply substitutes the well known common clutch disclosed by Mills, with another ordinary well known clutch disclosed by Long,

Jr.. The Office Action reads:

"Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the *air clutch* taught by Long, Jr., in the pumping assembly disclosed by Mills, to have advantageously increased the life of the clutch."

Long, Jr. discloses (as noted in applicant's remarks):

"a positive disconnection will typically improve the life of the clutch inasmuch as reduced scrubbing and sliding of the clutch elements against one another during idle..." (column 1, lines 41-45).

Long, Jr. continues,

"It is a further object of the instant invention to provide an air operated clutch which exhibits low drag in a deactivated state." (Column 2, lines 41-43.)

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Long, Jr. specifically teaches that the elimination of drag (or the reduction of scrubbing and sliding of the clutch elements) advantageously increased the life of the clutch. Therefore, the argument is not persuasive, and the rejection is proper.

In response to applicant's argument that, Mills does not disclose a problem with clutch life, obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, Long, Jr. provides the motivation for the combination. In addition to longer clutch life, Long, Jr. states:

"It is a still further object of the instant invention to provide a low drag, air operated clutch mechanism which is both compact and of straightforward, easy to manufacture design." (Column 2, lines 52-55.)

Although Mills teaches a pumping unit with a clutch, he does not disclose any of the clutch's specifications. Long, Jr. specifically teaches an air clutch that advantageously facilitated manufacturing and/or reduced drag, thereby increasing the life of the clutch. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used the clutch taught by Long, Jr., in the pumping unit disclosed by Mills, to have advantageously facilitated manufacturing and/or increased the life of the clutch. Therefore, this argument is not persuasive, and the rejection is proper.

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In response to applicant's argument, that "a person of ordinary skill in the pumping apparatus art would not select a pneumatic clutch based on the teachings of either Mills or Long, Jr. et al.", amounts to an attempt to narrow the scope of the skill required to deem the combination of prior art unobvious. However, in this instance, the level of skill required in the field of "pumping apparatus art" must include the ordinary skill level of the art of pumping apparatuses connected to a prime mover via a selective power transmission device. When the skill level is raised to the *minimum* level required to enable the invention, one of ordinary skill in the art would be compelled to look at both Mills and Long, Jr. et al., when considering improvements in an engine driven pumping unit connected by a coupling. Therefore, the argument is not persuasive, and the rejection is proper.

Conclusion

14. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy P. Solak whose telephone number is (703) 308-6197. The examiner can normally be reached on Monday through Thursday from 7:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy S. Thorpe, can be reached on (703) 308-0102. The fax phone number for the organization where this application or proceeding is assigned is (703) 305-3588.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0861.


CHARLES G. FREAY
PRIMARY EXAMINER


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April 25, 2001